



11/10/11

Technical Report for

K.P. Kauffmann Company, Inc.

Wattenberg Tank

Accutest Job Number: D28954

Sampling Date: 10/27/11

Report to:

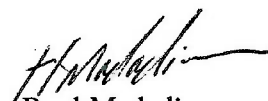
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Total number of pages in report: 26



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Brad Madadian
Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

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Test results relate only to samples analyzed.

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Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D28954

Wattenberg Tank

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
D28954-1	10/27/11	15:30 MH	10/27/11	AQ Water	TANK-1
D28954-1F	10/27/11	15:30 MH	10/27/11	AQ Water Filtered	TANK-1

CASE NARRATIVE / CONFORMANCE SUMMARY**Client:** K.P. Kauffmann Company, Inc.**Job No** D28954**Site:** Wattenberg Tank**Report Dat** 11/10/2011 2:16:58 PM

On 10/27/2011, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 1.5 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D28954 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010B**Matrix** AQ **Batch ID:** MP6139

- All samples were digested and analyzed within the recommended method holding time.
- Sample(s) D28977-3FMS, D28977-3FMSD were used as the QC samples for the metals analysis.
- MP6139-MB1 for Sodium: All sample results >10x method blank concentration.

Wet Chemistry By Method ASTM D287**Matrix** ALL **Batch ID:** GN12447

- The data for ASTM D287 meets quality control requirements.

Wet Chemistry By Method EPA 1664A**Matrix** AQ **Batch ID:** GP5872

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method EPA 300/SW846 9056**Matrix** AQ **Batch ID:** GP5807

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28977-3MS, D28977-3MSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate analysis.
- D28954-1 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- D28954-1 for Nitrogen, Nitrate: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM20 2540C**Matrix** AQ **Batch ID:** GN12272

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28873-IDUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM20 5310B

Matrix AQ

Batch ID: GP5834

2

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28899-8DUP, D28899-8MS, D28899-8MSD were used as the QC samples for the Total Organic Carbon analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: TANK-1
Lab Sample ID: D28954-1
Matrix: AQ - Water
Project: Wattenberg Tank

Date Sampled: 10/27/11
Date Received: 10/27/11
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	11600	250	mg/l	500	10/28/11 13:11	JML	EPA 300/SW846 9056
HEM Oil and Grease	31.5	5.1	mg/l	1	11/08/11	SWT	EPA 1664A
Nitrogen, Nitrate ^a	< 1.1	1.1	mg/l	25	10/28/11 11:06	JML	EPA 300/SW846 9056
Nitrogen, Nitrite ^a	< 31	31	mg/l	500	10/28/11 13:11	JML	EPA 300/SW846 9056
Solids, Total Dissolved	18800	10	mg/l	1	11/01/11	JK	SM20 2540C
Specific Gravity by Hydromete	1.0129			1	11/10/11	CJ	ASTM D287
Sulfate	63.8	13	mg/l	25	10/28/11 11:06	JML	EPA 300/SW846 9056
Total Organic Carbon	703	100	mg/l	100	11/02/11 15:42	GH	SM20 5310B
pH	7.11		su	1	10/28/11 10:40	JK	SM20 4500H

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: TANK-1
Lab Sample ID: D28954-1F
Matrix: AQ - Water Filtered
Project: Wattenberg Tank

Date Sampled: 10/27/11
Date Received: 10/27/11
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	259000	20000	ug/l	5	10/31/11	11/01/11 JB	SW846 6010B ¹	SW846 3010A ²
Magnesium	45100	10000	ug/l	5	10/31/11	11/01/11 JB	SW846 6010B ¹	SW846 3010A ²
Potassium	144000	50000	ug/l	5	10/31/11	11/01/11 JB	SW846 6010B ¹	SW846 3010A ²
Sodium	8170000	20000	ug/l	5	10/31/11	11/01/11 JB	SW846 6010B ¹	SW846 3010A ²

(1) Instrument QC Batch: MA1936

(2) Prep QC Batch: MP6139

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D28954

Client: K.P. KAUFFMAN INC.

Immediate Client Services Action Required: No

Date / Time Received: 10/27/2011 5:55:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: WATTENBERG TANK

Airbill #'s: HD

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | Infared gun | |
| 3. Cooler media: | Ice (bag) | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume rec'd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

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D28954: Chain of Custody
Page 2 of 2

Metals Analysis

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/31/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	5.9	5.9		
Antimony	30	3.1	3.1		
Arsenic	25	5.9	5.9		
Barium	10	1.1	1.1		
Beryllium	10	.44	.5		
Boron	50	4.8	4.8		
Cadmium	10	.27	.27		
Calcium	400	9.6	15	18.9	<400
Chromium	10	.18	.79		
Cobalt	5.0	.35	.35		
Copper	10	.85	2.8		
Iron	70	3.4	13		
Lead	50	1.6	2.1		
Lithium	2.0	.28	1.2		
Magnesium	200	5.8	10	5.2	<200
Manganese	5.0	.053	.31		
Molybdenum	10	.45	.87		
Nickel	30	.43	1		
Phosphorus	100	11	20		
Potassium	1000	55	55	111	<1000
Selenium	50	3.8	3.8		
Silicon	50	3.8	3.8		
Silver	30	.18	.31		
Sodium	400	110	110	218	* (a)
Strontium	5.0		.25		
Thallium	10	2.9	2.9		
Tin	50	5.5	9.9		
Titanium	10	.11	.31		
Uranium	50	1.5	3.5		
Vanadium	10	.16	.22		
Zinc	30	.28	1.8		

Associated samples MP6139: D28954-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested
(a) All sample results >10x method blank concentration.

5.1.1
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28954
 Account: KPKCOD - K.P. Kauffmann Company, Inc.
 Project: Wattenberg Tank

QC Batch ID: MP6139
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/31/11

Metal	D28977-3F Original MS	Spikelot MPICPALL % Rec	QC Limits
-------	--------------------------	----------------------------	--------------

Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron	anr				
Cadmium	anr				
Calcium	72000	91600	25000	110.0	75-125
Chromium	anr				
Cobalt					
Copper	anr				
Iron	anr				
Lead	anr				
Lithium					
Magnesium	34200	55300	25000	103.6	75-125
Manganese	anr				
Molybdenum					
Nickel					
Phosphorus					
Potassium	0.00	27400	25000	107.3	75-125
Selenium	anr				
Silicon					
Silver					
Sodium	64500	81600	25000	106.0	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP6139: D28954-1F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.12
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/31/11

Metal	D28977-3F Original MSD	Spikelot MPICPALL	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Boron	anr					
Cadmium	anr					
Calcium	72000	90900	25000	107.2	0.8	20
Chromium	anr					
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Lithium						
Magnesium	34200	55100	25000	102.8	0.4	20
Manganese	anr					
Molybdenum						
Nickel						
Phosphorus						
Potassium	0.00	27300	25000	106.9	0.4	20
Selenium	anr					
Silicon						
Silver						
Sodium	64500	80400	25000	101.2	1.5	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP6139: D28954-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.1.2
5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D28954
 Account: KPCCOD - K.P. Kauffmann Company, Inc.
 Project: Wattenberg Tank

QC Batch ID: MP6139
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/31/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron	anr			
Cadmium	anr			
Calcium	27300	25000	109.2	80-120
Chromium	anr			
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Lithium				
Magnesium	26200	25000	104.8	80-120
Manganese	anr			
Molybdenum				
Nickel				
Phosphorus				
Potassium	26500	25000	106.0	80-120
Selenium	anr			
Silicon				
Silver				
Sodium	26300	25000	105.2	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP6139: D28954-1F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

5.1.3

5



General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries



METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP5807/GN12243	0.20	0.0	mg/l	20	19.9	99.5	90-110%
Chloride	GP5807/GN12243	0.50	0.22	mg/l	20	19.5	97.5	90-110%
HEM Oil and Grease	GP5872/GN12360	5.0	0.0	mg/l	40	33.6	84.0	78-114%
Nitrogen, Nitrate	GP5807/GN12243	0.045	0.0	mg/l	4.52	4.39	97.2	90-110%
Nitrogen, Nitrite	GP5807/GN12243	0.061	0.0	mg/l	6.09	6.08	99.8	90-110%
Solids, Total Dissolved	GN12272	10	0.0	mg/l	400	394	98.5	90-110%
Sulfate	GP5807/GN12243	0.50	0.0	mg/l	30	28.9	96.3	90-110%
Total Organic Carbon	GP5834/GN12322	1.0	0.0	mg/l	7.2	7.24	100.6	90-110%
pH	GN12230			su	8.00	7.96	99.5	99.3-100.7

Associated Samples:

Batch GN12230: D28954-1

Batch GN12272: D28954-1

Batch GP5807: D28954-1

Batch GP5834: D28954-1

Batch GP5872: D28954-1

(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP5872/GN12360	mg/l	40	35.5	5.5	20%

Associated Samples:
Batch GP5872: D28954-1
(*) Outside of QC limits

6.2

6

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN12272	D28873-1	mg/l	756	756	0.0	0-25%
Total Organic Carbon	GP5834/GN12322	D28899-8	mg/l	3.1	2.9	6.7	0-20%

Associated Samples:
Batch GN12272: D28954-1
Batch GP5834: D28954-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP5807/GN12243	D28977-3	mg/l	0.0	12.5	12.4	99.2	80-120%
Chloride	GP5807/GN12243	D28977-3	mg/l	8.2	50	58.3	100.2	80-120%
Nitrogen, Nitrate	GP5807/GN12243	D28977-3	mg/l	1.5	2.83	4.3	99.1	80-120%
Nitrogen, Nitrite	GP5807/GN12243	D28977-3	mg/l	0.0	1.52	1.5	98.5	80-120%
Sulfate	GP5807/GN12243	D28977-3	mg/l	115	50	169	108.0	80-120%
Total Organic Carbon	GP5834/GN12322	D28899-8	mg/l	3.1	10	13.4	103.0	80-120%

Associated Samples:

Batch GP5807: D28954-1

Batch GP5834: D28954-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP5807/GN12243	D28977-3	mg/l	0.0	12.5	12.5	0.8	20%
Chloride	GP5807/GN12243	D28977-3	mg/l	8.2	50	58.1	0.3	20%
Nitrogen, Nitrate	GP5807/GN12243	D28977-3	mg/l	1.5	2.83	4.3	0.0	20%
Nitrogen, Nitrite	GP5807/GN12243	D28977-3	mg/l	0.0	1.52	1.5	0.0	20%
Sulfate	GP5807/GN12243	D28977-3	mg/l	115	50	168	0.6	20%
Total Organic Carbon	GP5834/GN12322	D28899-8	mg/l	3.1	10	13.4	0.0	20%

Associated Samples:

Batch GP5807: D28954-1

Batch GP5834: D28954-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



12/06/11

Technical Report for

K. P. Kauffmann Company, Inc.

Wattenberg Tank

PO# 7591

Accutest Job Number: D29699

Sampling Date: 11/22/11

Report to:

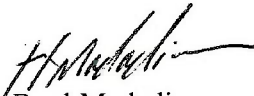
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Total number of pages in report: 26



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Brad Madadian
Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

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Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D29699

Wattenberg Tank

Project No: PO# 7591

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D29699-1	11/22/11	12:00 MH	11/22/11	AQ	Water	TANK-1
D29699-1F	11/22/11	12:00 MH	11/22/11	AQ	Water Filtered	TANK-1

CASE NARRATIVE / CONFORMANCE SUMMARY**Client:** K.P. Kauffmann Company, Inc.**Job No** D29699**Site:** Wattenberg Tank**Report Dat** 12/6/2011 12:50:00 PM

On 11/22/2011, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 2.1 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D29699 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010B**Matrix** AQ **Batch ID:** MP6352

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29739-1MS, D29739-1MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method ASTM D287**Matrix** ALL **Batch ID:** GN12751

- The data for ASTM D287 meets quality control requirements.

Wet Chemistry By Method EPA 1664A**Matrix** AQ **Batch ID:** GP6040

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method EPA 300/SW846 9056**Matrix** AQ **Batch ID:** GP6005

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29711-1MS, D29711-1MSD were used as the QC samples for the anions analysis.
- D29699-1 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- D29699-1 for Nitrogen, Nitrate: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM20 2540C**Matrix** AQ **Batch ID:** GN12659

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29674-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM20 5310B

Matrix AQ

Batch ID: GP6057

2

- ☒ All samples were prepared and analyzed within the recommended method holding time.
- ☒ All method blanks for this batch meet method specific criteria.
- ☒ Sample(s) D29825-3DUP, D29826-2MS, D29826-2MSD were used as the QC samples for the Total Organic Carbon analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: TANK-1
Lab Sample ID: D29699-1
Matrix: AQ - Water
Project: Wattenberg Tank

Date Sampled: 11/22/11
Date Received: 11/22/11
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	11700	250	mg/l	500	11/23/11 12:34	JML	EPA 300/SW846 9056
HEM Oil and Grease	15.7	5.3	mg/l	1.058201	12/02/11	SWT	EPA 1664A
Nitrogen, Nitrate ^a	< 1.1	1.1	mg/l	25	11/23/11 10:28	JML	EPA 300/SW846 9056
Nitrogen, Nitrite ^a	< 31	31	mg/l	500	11/23/11 12:34	JML	EPA 300/SW846 9056
Solids, Total Dissolved	20200	10	mg/l	1	11/28/11	JK	SM20 2540C
Specific Gravity by Hydromete	1.0151			1	12/02/11	CJ	ASTM D287
Sulfate	26.0	13	mg/l	25	11/23/11 10:28	JML	EPA 300/SW846 9056
Total Organic Carbon	436	25	mg/l	25	12/05/11 12:16	JML	SM20 5310B
pH	7.23		su	1	11/22/11 15:30	JK	SM20 4500H

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: TANK-1	Date Sampled: 11/22/11
Lab Sample ID: D29699-1F	Date Received: 11/22/11
Matrix: AQ - Water Filtered	Percent Solids: n/a
Project: Wattenberg Tank	

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	248000	20000	ug/l	50	11/28/11	11/30/11 JB	SW846 6010B ¹	SW846 3010A ²
Magnesium	37500	10000	ug/l	50	11/28/11	11/30/11 JB	SW846 6010B ¹	SW846 3010A ²
Potassium	201000	50000	ug/l	50	11/28/11	11/30/11 JB	SW846 6010B ¹	SW846 3010A ²
Sodium	8230000	20000	ug/l	50	11/28/11	11/30/11 JB	SW846 6010B ¹	SW846 3010A ²

(1) Instrument QC Batch: MA2011

(2) Prep QC Batch: MP6352

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Client / Reporting Information		Project Information		Requested Analysis		Matrix Codes																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Project Contact: KENT GILBERT Sherry Glass <i>kgilbert@kpk.com</i>		Project #																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Sampler's Name MICHAEL HATTEL (303-665-1400)		Client Purchase Order # 7591																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Accutest Sample #	Field ID / Point of Collection	SUMMA #	MEOH Vol	Date	Time	Sampled by	Matrix	# of bottles	PC	NOH	NO3	NO2	NO4	NO5	NO6	NO7	NO8	NO9	NO10	NO11	NO12	NO13	NO14	NO15	NO16	NO17	NO18	NO19	NO20	NO21	NO22	NO23	NO24	NO25	NO26	NO27	NO28	NO29	NO30	NO31	NO32	NO33	NO34	NO35	NO36	NO37	NO38	NO39	NO40	NO41	NO42	NO43	NO44	NO45	NO46	NO47	NO48	NO49	NO50	NO51	NO52	NO53	NO54	NO55	NO56	NO57	NO58	NO59	NO60	NO61	NO62	NO63	NO64	NO65	NO66	NO67	NO68	NO69	NO70	NO71	NO72	NO73	NO74	NO75	NO76	NO77	NO78	NO79	NO80	NO81	NO82	NO83	NO84	NO85	NO86	NO87	NO88	NO89	NO90	NO91	NO92	NO93	NO94	NO95	NO96	NO97	NO98	NO99	NO100	NO101	NO102	NO103	NO104	NO105	NO106	NO107	NO108	NO109	NO110	NO111	NO112	NO113	NO114	NO115	NO116	NO117	NO118	NO119	NO120	NO121	NO122	NO123	NO124	NO125	NO126	NO127	NO128	NO129	NO130	NO131	NO132	NO133	NO134	NO135	NO136	NO137	NO138	NO139	NO140	NO141	NO142	NO143	NO144	NO145	NO146	NO147	NO148	NO149	NO150	NO151	NO152	NO153	NO154	NO155	NO156	NO157	NO158	NO159	NO160	NO161	NO162	NO163	NO164	NO165	NO166	NO167	NO168	NO169	NO170	NO171	NO172	NO173	NO174	NO175	NO176	NO177	NO178	NO179	NO180	NO181	NO182	NO183	NO184	NO185	NO186	NO187	NO188	NO189	NO190	NO191	NO192	NO193	NO194	NO195	NO196	NO197	NO198	NO199	NO200	NO201	NO202	NO203	NO204	NO205	NO206	NO207	NO208	NO209	NO210	NO211	NO212	NO213	NO214	NO215	NO216	NO217	NO218	NO219	NO220	NO221	NO222	NO223	NO224	NO225	NO226	NO227	NO228	NO229	NO230	NO231	NO232	NO233	NO234	NO235	NO236	NO237	NO238	NO239	NO240	NO241	NO242	NO243	NO244	NO245	NO246	NO247	NO248	NO249	NO250	NO251	NO252	NO253	NO254	NO255	NO256	NO257	NO258	NO259	NO260	NO261	NO262	NO263	NO264	NO265	NO266	NO267	NO268	NO269	NO270	NO271	NO272	NO273	NO274	NO275	NO276	NO277	NO278	NO279	NO280	NO281	NO282	NO283	NO284	NO285	NO286	NO287	NO288	NO289	NO290	NO291	NO292	NO293	NO294	NO295	NO296	NO297	NO298	NO299	NO300	NO301	NO302	NO303	NO304	NO305	NO306	NO307	NO308	NO309	NO310	NO311	NO312	NO313	NO314	NO315	NO316	NO317	NO318	NO319	NO320	NO321	NO322	NO323	NO324	NO325	NO326	NO327	NO328	NO329	NO330	NO331	NO332	NO333	NO334	NO335	NO336	NO337	NO338	NO339	NO340	NO341	NO342	NO343	NO344	NO345	NO346	NO347	NO348	NO349	NO350	NO351	NO352	NO353	NO354	NO355	NO356	NO357	NO358	NO359	NO360	NO361	NO362	NO363	NO364	NO365	NO366	NO367	NO368	NO369	NO370	NO371	NO372	NO373	NO374	NO375	NO376	NO377	NO378	NO379	NO380	NO381	NO382	NO383	NO384	NO385	NO386	NO387	NO388	NO389	NO390	NO391	NO392	NO393	NO394	NO395	NO396	NO397	NO398	NO399	NO400	NO401	NO402	NO403	NO404	NO405	NO406	NO407	NO408	NO409	NO410	NO411	NO412	NO413	NO414	NO415	NO416	NO417	NO418	NO419	NO420	NO421	NO422	NO423	NO424	NO425	NO426	NO427	NO428	NO429	NO430	NO431	NO432	NO433	NO434	NO435	NO436	NO437	NO438	NO439	NO440	NO441	NO442	NO443	NO444	NO445	NO446	NO447	NO448	NO449	NO450	NO451	NO452	NO453	NO454	NO455	NO456	NO457	NO458	NO459	NO460	NO461	NO462	NO463	NO464	NO465	NO466	NO467	NO468	NO469	NO470	NO471	NO472	NO473	NO474	NO475	NO476	NO477	NO478	NO479	NO480	NO481	NO482	NO483	NO484	NO485	NO486	NO487	NO488	NO489	NO490	NO491	NO492	NO493	NO494	NO495	NO496	NO497	NO498	NO499	NO500	NO501	NO502	NO503	NO504	NO505	NO506	NO507	NO508	NO509	NO510	NO511	NO512	NO513	NO514	NO515	NO516	NO517	NO518	NO519	NO520	NO521	NO522	NO523	NO524	NO525	NO526	NO527	NO528	NO529	NO530	NO531	NO532	NO533	NO534	NO535	NO536	NO537	NO538	NO539	NO540	NO541	NO542	NO543	NO544	NO545	NO546	NO547	NO548	NO549	NO550	NO551	NO552	NO553	NO554	NO555	NO556	NO557	NO558	NO559	NO560	NO561	NO562	NO563	NO564	NO565	NO566	NO567	NO568	NO569	NO570	NO571	NO572	NO573	NO574	NO575	NO576	NO577	NO578	NO579	NO580	NO581	NO582	NO583	NO584	NO585	NO586	NO587	NO588	NO589	NO590	NO591	NO592	NO593	NO594	NO595	NO596	NO597	NO598	NO599	NO600	NO601	NO602	NO603	NO604	NO605	NO606	NO607	NO608	NO609	NO610	NO611	NO612	NO613	NO614	NO615	NO616	NO617	NO618	NO619	NO620	NO621	NO622	NO623	NO624	NO625	NO626	NO627	NO628	NO629	NO630	NO631	NO632	NO633	NO634	NO635	NO636	NO637	NO638	NO639	NO640	NO641	NO642	NO643	NO644	NO645	NO646	NO647	NO648	NO649	NO650	NO651	NO652	NO653	NO654	NO655	NO656	NO657	NO658	NO659	NO660	NO661	NO662	NO663	NO664	NO665	NO666	NO667	NO668	NO669	NO670	NO671	NO672	NO673	NO674	NO675	NO676	NO677	NO678	NO679	NO680	NO681	NO682	NO683	NO684	NO685	NO686	NO687	NO688	NO689	NO690	NO691	NO692	NO693	NO694	NO695	NO696	NO697	NO698	NO699	NO700	NO701	NO702	NO703	NO704	NO705	NO706	NO707	NO708	NO709	NO710	NO711	NO712	NO713	NO714	NO715	NO716	NO717	NO718	NO719	NO720	NO721	NO722	NO723	NO724	NO725	NO726	NO727	NO728	NO729	NO730	NO731	NO732	NO733	NO734	NO735	NO736	NO737	NO738	NO739	NO740	NO741	NO742	NO743	NO744	NO745	NO746	NO747	NO748	NO749	NO750	NO751	NO752	NO753	NO754	NO755	NO756	NO757	NO758	NO759	NO760	NO761	NO762	NO763	NO764	NO765	NO766	NO767	NO768	NO769	NO770	NO771	NO772	NO773	NO774	NO775	NO776	NO777	NO778	NO779	NO780	NO781	NO782	NO783	NO784	NO785	NO786	NO787	NO788	NO789	NO790	NO791	NO792	NO793	NO794	NO795	NO796	NO797	NO798	NO799	NO800	NO801	NO802	NO803	NO804	NO805	NO806	NO807	NO808	NO809	NO810	NO811	NO812	NO813	NO814	NO815	NO816	NO817	NO818	NO819	NO820	NO821	NO822	NO823	NO824	NO825	NO826	NO827	NO828	NO829	NO830	NO831	NO832	NO833	NO834	NO835	NO836	NO837	NO838	NO839	NO840	NO841	NO842	NO843	NO844	NO845	NO846	NO847	NO848	NO849	NO8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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D29699

Client: K.P. KAUFFMAN COMPANY INC.

Immediate Client Services Action Required: No

Date / Time Received: 11/22/2011 1:15:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: WATTENBERG TANK

Airbill #'s: HD

Cooler Security

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | Infrared gun | |
| 3. Cooler media: | Ice (bag) | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

Y or N

N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume rec'd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

Accutest Laboratories
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D29699: Chain of Custody
Page 2 of 2

Metals Analysis

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/28/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	5.9	5.9		
Antimony	30	3.1	3.1		
Arsenic	25	5.9	5.9		
Barium	10	1.1	1.1		
Beryllium	10	.44	.5		
Boron	50	4.8	4.8		
Cadmium	10	.27	.27		
Calcium	400	9.6	15	11.3	<400
Chromium	10	.18	.79		
Cobalt	5.0	.35	.35		
Copper	10	.85	2.8		
Iron	70	3.4	13		
Lead	50	1.6	2.1		
Lithium	2.0	.28	1.2		
Magnesium	200	5.8	10	3.3	<200
Manganese	5.0	.053	.31		
Molybdenum	10	.45	.87		
Nickel	30	.43	1		
Phosphorus	100	11	20		
Potassium	1000	55	55	-28	<1000
Selenium	50	3.8	3.8		
Silicon	50	3.8	3.8		
Silver	30	.18	.31		
Sodium	400	110	110	13.0	<400
Strontium	5.0		.25		
Thallium	10	2.9	2.9		
Tin	50	5.5	9.9		
Titanium	10	.11	.31		
Uranium	50	1.5	3.5		
Vanadium	10	.16	.22		
Zinc	30	.28	1.8		

Associated samples MP6352: D29699-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

5.1.1
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/28/11

Metal	D29739-1 Original MS	Spikelot MPICPAL % Rec	QC Limits
Aluminum			
Antimony			
Arsenic	anr		
Barium	anr		
Beryllium			
Boron			
Cadmium	anr		
Calcium	113000	138000 25000	100.0 75-125
Chromium	anr		
Cobalt			
Copper			
Iron	anr		
Lead	anr		
Lithium			
Magnesium	49600	73900 25000	97.2 75-125
Manganese	anr		
Molybdenum			
Nickel			
Phosphorus			
Potassium	3080	29400 25000	105.3 75-125
Selenium	anr		
Silicon			
Silver	anr		
Sodium	435000	455000 25000	80.0 75-125
Strontium			
Thallium			
Tin			
Titanium			
Uranium			
Vanadium			
Zinc			

Associated samples MP6352: D29699-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.1.2

5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/28/11

Metal	D29739-1 Original MSD	Spikelet MPICPALL % Rec	MSD RPD	QC Limit
-------	--------------------------	----------------------------	------------	-------------

Aluminum						
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Boron						
Cadmium	anr					
Calcium	113000	140000	25000	108.0	1.4	20
Chromium	anr					
Cobalt						
Copper						
Iron	anr					
Lead	anr					
Lithium						
Magnesium	49600	74500	25000	99.6	0.8	20
Manganese	anr					
Molybdenum						
Nickel						
Phosphorus						
Potassium	3080	29400	25000	105.3	0.0	20
Selenium	anr					
Silicon						
Silver	anr					
Sodium	435000	456000	25000	84.0	0.2	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP6352: D29699-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.1.2
5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/28/11

Metal	BSP Result	Spikelot MPICPALL % Rec	QC Limits
Aluminum			
Antimony			
Arsenic	anr		
Barium	anr		
Beryllium			
Boron			
Cadmium	anr		
Calcium	26700	25000	106.8 80-120
Chromium	anr		
Cobalt			
Copper			
Iron	anr		
Lead	anr		
Lithium			
Magnesium	24400	25000	97.6 80-120
Manganese	anr		
Molybdenum			
Nickel			
Phosphorus			
Potassium	25200	25000	100.8 80-120
Selenium	anr		
Silicon			
Silver	anr		
Sodium	24600	25000	98.4 80-120
Strontium			
Thallium			
Tin			
Titanium			
Uranium			
Vanadium			
Zinc			

Associated samples MP6352: D29699-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

5.1.3

5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

5.1.3

5

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP6005/GN12657	0.20	0.0	mg/l	20	19.2	96.0	90-110%
Chloride	GP6005/GN12657	0.50	0.27	mg/l	20	19.7	98.5	90-110%
HEM Oil and Grease	GP6040/GN12728	5.0	0.0	mg/l	40	35.0	87.5	78-114%
Nitrogen, Nitrate	GP6005/GN12657	0.045	0.0	mg/l	4.52	4.32	95.6	90-110%
Nitrogen, Nitrite	GP6005/GN12657	0.061	0.0	mg/l	6.09	6.23	102.3	90-110%
Solids, Total Dissolved	GN12659	10	0.0	mg/l	400	403	100.8	90-110%
Sulfate	GP6005/GN12657	0.50	0.0	mg/l	30	29.0	96.7	90-110%
Total Organic Carbon	GP6057/GN12769	1.0	0.0	mg/l	7.2	7.45	103.5	90-110%
pH	GN12643			su	8.00	7.96	99.5	99.3-100

Associated Samples:

Batch GN12643: D29699-1
Batch GN12659: D29699-1
Batch GP6005: D29699-1
Batch GP6040: D29699-1
Batch GP6057: D29699-1
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP6040/GN12728	mg/l	40	33.4	4.7	20%

Associated Samples:
Batch GP6040: D29699-1
(*) Outside of QC limits

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2
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DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN12659	D29674-1	mg/l	92.0	96.0	4.3	0-25%
Total Organic Carbon	GP6057/GN12769	D29825-3	mg/l	6.1	6.2	1.6	0-20%

Associated Samples:
Batch GN12659: D29699-1
Batch GP6057: D29699-1
(*) Outside of QC limits

6.3
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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP6005/GN12657	D29711-1	mg/l	0.20	2.5	2.5	92.0	80-120%
Chloride	GP6005/GN12657	D29711-1	mg/l	12.0	10	21.6	96.0	80-120%
Nitrogen, Nitrate	GP6005/GN12657	D29711-1	mg/l	0.0	0.565	0.52	92.0	80-120%
Nitrogen, Nitrite	GP6005/GN12657	D29711-1	mg/l	0.0	0.305	0.30	98.5	80-120%
Sulfate	GP6005/GN12657	D29711-1	mg/l	179	100	272	93.0	80-120%
Total Organic Carbon	GP6057/GN12769	D29826-2	mg/l	3.1	10	14.1	110.0	80-120%

Associated Samples:

Batch GP6005: D29699-1

Batch GP6057: D29699-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP6005/GN12657	D29711-1	mg/l	0.20	2.5	2.6	3.9	20%
Chloride	GP6005/GN12657	D29711-1	mg/l	12.0	10	21.6	0.0	20%
Nitrogen, Nitrate	GP6005/GN12657	D29711-1	mg/l	0.0	0.565	0.53	1.9	20%
Nitrogen, Nitrite	GP6005/GN12657	D29711-1	mg/l	0.0	0.305	0.29	3.4	20%
Sulfate	GP6005/GN12657	D29711-1	mg/l	179	100	279	2.5	20%
Total Organic Carbon	GP6057/GN12769	D29826-2	mg/l	3.1	10	13.8	2.2	20%

Associated Samples:

Batch GP6005: D29699-1

Batch GP6057: D29699-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



01/09/12

Technical Report for

K.P. Kauffmann Company, Inc.

Wattenberg GW

PO# 7591

Accutest Job Number: D30535

Sampling Date: 12/21/11

Report to:

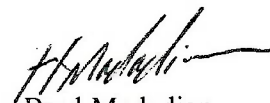
K.P. Kauffmann Company, Inc
1675 Broadway Suite 2800
Denver, CO 80202-4628
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ATTN: Sherry Glass

Total number of pages in report: 40



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Brad Madadian
Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

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Test results relate only to samples analyzed.

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Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D30535

Wattenberg GW

Project No: PO# 7591

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D30535-1	12/21/11	08:00 MH	12/21/11	AQ	Ground Water	OW-1
D30535-1F	12/21/11	08:00 MH	12/21/11	AQ	Groundwater Filtered	OW-1
D30535-2	12/21/11	08:55 MH	12/21/11	AQ	Ground Water	OW-2
D30535-2F	12/21/11	08:55 MH	12/21/11	AQ	Groundwater Filtered	OW-2
D30535-3	12/21/11	09:55 MH	12/21/11	AQ	Ground Water	OW-3
D30535-3F	12/21/11	09:55 MH	12/21/11	AQ	Groundwater Filtered	OW-3
D30535-4	12/21/11	11:00 MH	12/21/11	AQ	Ground Water	OW-4
D30535-4F	12/21/11	11:00 MH	12/21/11	AQ	Groundwater Filtered	OW-4

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: K.P. Kauffmann Company, Inc.

Job No D30535

Site: Wattenberg GW

Report Date 1/9/2012 9:01:07 AM

On 12/21/2011, 4 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D30535 was assigned to the project. The lab sample IDs, client sample IDs, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GC By Method SW846 8021B

Matrix AQ	Batch ID: GTB816
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) D30425-2MS, D30425-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010B

Matrix AQ	Batch ID: MP6540
------------------	-------------------------

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D30545-1MS, D30545-1MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method EPA 1664A

Matrix AQ	Batch ID: GP6223
------------------	-------------------------

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix AQ	Batch ID: GP6171
------------------	-------------------------

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D25282-8MS, D25282-8MSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate, Chloride analysis.
- D30535-1, D30535-2, D30535-3, and D30535-4 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- D30535-1 for Nitrogen, Nitrate: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM20 2320B

Matrix AQ	Batch ID: GN13081
------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D30551-1DUP, D30551-1MS, D30551-1MSD were used as the QC samples for the Alkalinity, Total as CaCO₃ analysis.

Matrix AQ	Batch ID: GN13085
------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix AQ	Batch ID: GN13086
------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method SM20 2540C

Matrix AQ	Batch ID: GN13041
------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D30535-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM20 5310B

Matrix AQ	Batch ID: GP6210
------------------	-------------------------

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D30425-4DUP, D30535-1MS, D30535-1MSD were used as the QC samples for the Total Organic Carbon analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	OW-1	Date Sampled:	12/21/11
Lab Sample ID:	D30535-1	Date Received:	12/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	Wattenberg GW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB14450.D	1	12/28/11	SK	n/a	n/a	GTB816
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1.0	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	104%		60-140%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: OW-1	Date Sampled: 12/21/11
Lab Sample ID: D30535-1	Date Received: 12/21/11
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Wattenberg GW	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC 803	803	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Total as CaCO ₃	803	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Chloride	4150	100	mg/l	200	12/21/11 18:57	GH	EPA 300/SW846 9056
HEM Oil and Grease	10.3	5.6	mg/l	1	01/04/12	SWT	EPA 1664A
Nitrogen, Nitrate ^a	< 0.90	0.90	mg/l	20	12/21/11 14:05	GH	EPA 300/SW846 9056
Nitrogen, Nitrite ^a	< 6.1	6.1	mg/l	100	12/21/11 18:43	GH	EPA 300/SW846 9056
Solids, Total Dissolved	10100	10	mg/l	1	12/27/11	JK	SM20 2540C
Sulfate	1660	50	mg/l	100	12/21/11 18:43	GH	EPA 300/SW846 9056
Total Organic Carbon	34.5	2.0	mg/l	2	12/29/11 15:44	NS	SM20 5310B

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: OW-1
Lab Sample ID: D30535-1F
Matrix: AQ - Groundwater Filtered
Project: Wattenberg GW

Date Sampled: 12/21/11
Date Received: 12/21/11
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	427000	400	ug/l	1	12/23/11	12/23/11 JB	SW846 6010B ¹	SW846 3010A ³
Magnesium	407000	200	ug/l	1	12/23/11	12/23/11 JB	SW846 6010B ¹	SW846 3010A ³
Potassium	11900	1000	ug/l	1	12/23/11	12/23/11 JB	SW846 6010B ¹	SW846 3010A ³
Sodium	2530000	4000	ug/l	10	12/23/11	12/28/11 JB	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA2075

(2) Instrument QC Batch: MA2082

(3) Prep QC Batch: MP6540

RL = Reporting Limit

Report of Analysis

Client Sample ID:	OW-2	Date Sampled:	12/21/11
Lab Sample ID:	D30535-2	Date Received:	12/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	Wattenberg GW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB14451.D	1	12/28/11	SK	n/a	n/a	GTB816
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.25	1.0	0.20	ug/l	J
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	96%		60-140%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID: OW-2	Date Sampled: 12/21/11
Lab Sample ID: D30535-2	Date Received: 12/21/11
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Wattenberg GW	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	986	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Total as CaCO ₃	986	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Chloride	4740	200	mg/l	400	12/21/11 19:25	GH	EPA 300/SW846 9056
HEM Oil and Grease	12.8	5.0	mg/l	1	01/04/12	SWT	EPA 1664A
Nitrogen, Nitrate	8.8	0.90	mg/l	20	12/21/11 14:19	GH	EPA 300/SW846 9056
Nitrogen, Nitrite ^a	< 6.1	6.1	mg/l	100	12/21/11 19:11	GH	EPA 300/SW846 9056
Solids, Total Dissolved	16800	10	mg/l	1	12/27/11	JK	SM20 2540C
Sulfate	5270	200	mg/l	400	12/21/11 19:25	GH	EPA 300/SW846 9056
Total Organic Carbon	46.4	2.0	mg/l	2	12/29/11 15:57	NS	SM20 5310B

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: OW-2	Date Sampled: 12/21/11
Lab Sample ID: D30535-2F	Date Received: 12/21/11
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Wattenberg GW	

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	568000	400	ug/l	1	12/23/11	12/23/11 JB	SW846 6010B ¹	SW846 3010A ³
Magnesium	682000	200	ug/l	1	12/23/11	12/23/11 JB	SW846 6010B ¹	SW846 3010A ³
Potassium	19900	1000	ug/l	1	12/23/11	12/23/11 JB	SW846 6010B ¹	SW846 3010A ³
Sodium	4050000	4000	ug/l	10	12/23/11	12/28/11 JB	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA2075

(2) Instrument QC Batch: MA2082

(3) Prep QC Batch: MP6540

RL = Reporting Limit

Report of Analysis

3.5
3

Client Sample ID:	OW-3	Date Sampled:	12/21/11
Lab Sample ID:	D30535-3	Date Received:	12/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	Wattenberg GW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB14452.D	1	12/28/11	SK	n/a	n/a	GTB816
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1.3	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	95%		60-140%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: OW-3	Date Sampled: 12/21/11
Lab Sample ID: D30535-3	Date Received: 12/21/11
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Wattenberg GW	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	988	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Total as CaCO3	988	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Chloride	3650	200	mg/l	400	12/21/11 19:53	GH	EPA 300/SW846 9056
HEM Oil and Grease	7.3	5.8	mg/l	1	01/04/12	SWT	EPA 1664A
Nitrogen, Nitrate	4.1	0.90	mg/l	20	12/21/11 14:33	GH	EPA 300/SW846 9056
Nitrogen, Nitrite ^a	< 6.1	6.1	mg/l	100	12/21/11 19:39	GH	EPA 300/SW846 9056
Solids, Total Dissolved	15500	10	mg/l	1	12/27/11	JK	SM20 2540C
Sulfate	5620	200	mg/l	400	12/21/11 19:53	GH	EPA 300/SW846 9056
Total Organic Carbon	45.9	2.0	mg/l	2	12/29/11 16:08	NS	SM20 5310B

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: OW-3	Date Sampled: 12/21/11
Lab Sample ID: D30535-3F	Date Received: 12/21/11
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Wattenberg GW	

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	455000	400	ug/l	1	12/23/11	12/23/11 JB	SW846 6010B ¹	SW846 3010A ³
Magnesium	596000	2000	ug/l	10	12/23/11	12/28/11 JB	SW846 6010B ²	SW846 3010A ³
Potassium	18000	10000	ug/l	10	12/23/11	12/28/11 JB	SW846 6010B ²	SW846 3010A ³
Sodium	3960000	4000	ug/l	10	12/23/11	12/28/11 JB	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA2075

(2) Instrument QC Batch: MA2082

(3) Prep QC Batch: MP6540

RL = Reporting Limit

Report of Analysis

Client Sample ID:	OW-4	Date Sampled:	12/21/11
Lab Sample ID:	D30535-4	Date Received:	12/21/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	Wattenberg GW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB14453.D	1	12/28/11	SK	n/a	n/a	GTB816
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	97%		60-140%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: OW-4	Date Sampled: 12/21/11
Lab Sample ID: D30535-4	Date Received: 12/21/11
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Wattenberg GW	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC 322	322	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Total as CaCO3	322	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Chloride	3430	200	mg/l	400	12/21/11 20:21	GH	EPA 300/SW846 9056
HEM Oil and Grease	8.1	6.2	mg/l	1	01/04/12	SWT	EPA 1664A
Nitrogen, Nitrate	69.9	4.5	mg/l	100	12/21/11 20:07	GH	EPA 300/SW846 9056
Nitrogen, Nitrite ^a	< 6.1	6.1	mg/l	100	12/21/11 20:07	GH	EPA 300/SW846 9056
Solids, Total Dissolved	17100	10	mg/l	1	12/27/11	JK	SM20 2540C
Sulfate	7210	200	mg/l	400	12/21/11 20:21	GH	EPA 300/SW846 9056
Total Organic Carbon	73.8	5.0	mg/l	5	12/29/11 16:21	NS	SM20 5310B

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: OW-4	Date Sampled: 12/21/11
Lab Sample ID: D30535-4F	Date Received: 12/21/11
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Wattenberg GW	

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	507000	400	ug/l	1	12/23/11	12/23/11 JB	SW846 6010B ¹	SW846 3010A ³
Magnesium	578000	200	ug/l	1	12/23/11	12/23/11 JB	SW846 6010B ¹	SW846 3010A ³
Potassium	22000	1000	ug/l	1	12/23/11	12/23/11 JB	SW846 6010B ¹	SW846 3010A ³
Sodium	3910000	4000	ug/l	10	12/23/11	12/28/11 JB	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA2075

(2) Instrument QC Batch: MA2082

(3) Prep QC Batch: MP6540

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D30535

Client: K.P.KAUFFMAN COMPANY INC.

Immediate Client Services Action Required: No

Date / Time Received: 12/21/2011 12:45:00 P

No. Coolers: 1

Client Service Action Required at Login: No

Project: WATTERBERG GROUNDWATER

Airbill #'s: HD

Cooler Security

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | Infared gun | |
| 3. Cooler media: | Ice (bag) | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|--------------------------|
| 1. Trip Blank present / cooler: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Trip Blank listed on COC: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

Y or N

N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume rec'd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www.accutest.com

D30535: Chain of Custody
Page 2 of 2

GC Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: D30535

Account: KPKCOD K.P. Kauffmann Company, Inc.

Project: Wattenberg GW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB816-MB	TB14433.D	1	12/28/11	SK	n/a	n/a	GTB816

The QC reported here applies to the following samples:

Method: SW846 8021B

D30535-1, D30535-2, D30535-3, D30535-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	107% 60-140%

Blank Spike Summary

Page 1 of 1

Job Number: D30535

Account: KPKCOD K.P. Kauffmann Company, Inc.

Project: Wattenberg GW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB816-BS	TB14434.D	1	12/28/11	SK	n/a	n/a	GTB816

The QC reported here applies to the following samples:

Method: SW846 8021B

D30535-1, D30535-2, D30535-3, D30535-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	27.2	29.1	107	70-130
100-41-4	Ethylbenzene	45.6	47.3	104	70-130
108-88-3	Toluene	212	206	97	70-130
1330-20-7	Xylenes (total)	216	238	110	68-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	116%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D30535

Account: KPKCOD K.P. Kauffmann Company, Inc.

Project: Wattenberg GW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D30425-2MS	TB14436.D	1	12/28/11	SK	n/a	n/a	GTB816
D30425-2MSD	TB14437.D	1	12/28/11	SK	n/a	n/a	GTB816
D30425-2	TB14435.D	1	12/28/11	SK	n/a	n/a	GTB816

The QC reported here applies to the following samples:

Method: SW846 8021B

D30535-1, D30535-2, D30535-3, D30535-4

CAS No.	Compound	D30425-2 ug/l	Spike Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	99.4		27.2	128	105	133	124	4	67-130/30
100-41-4	Ethylbenzene	7.0		45.6	40.6	74	40.8	74	0	62-130/30
108-88-3	Toluene	73.4		212	216	67	218	68	1	66-130/30
1330-20-7	Xylenes (total)	38.4		216	209	79	210	79	0	61-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D30425-2	Limits
120-82-1	1,2,4-Trichlorobenzene	108%	99%	106%	60-140%

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/23/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	5.9	5.9		
Antimony	30	3.1	3.1		
Arsenic	25	5.9	5.9		
Barium	10	1.1	1.1		
Beryllium	10	.44	.5		
Boron	50	4.8	4.8		
Cadmium	10	.27	.27		
Calcium	400	9.6	15	48.8	<400
Chromium	10	.18	.79		
Cobalt	5.0	.35	.35		
Copper	10	.85	2.8		
Iron	70	3.4	13		
Lead	50	1.6	2.1		
Lithium	2.0	.28	1.2		
Magnesium	200	5.8	10	2.1	<200
Manganese	5.0	.053	.31		
Molybdenum	10	.45	.87		
Nickel	30	.43	1		
Phosphorus	100	11	20		
Potassium	1000	55	55	24.7	<1000
Selenium	50	3.8	3.8		
Silicon	50	3.8	3.8		
Silver	30	.18	.31		
Sodium	400	110	110	95.3	<400
Strontium	5.0		.25		
Thallium	10	2.9	2.9		
Tin	50	5.5	9.9		
Titanium	10	.11	.31		
Uranium	50	1.5	3.5		
Vanadium	10	.16	.22		
Zinc	30	.28	1.8		

Associated samples MP6540: D30535-1F, D30535-2F, D30535-3F, D30535-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

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MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/23/11

Metal	D30545-1 Original MS	Spikelot MPICPAL % Rec	QC Limits
Aluminum			
Antimony			
Arsenic	anr		
Barium	anr		
Beryllium			
Boron			
Cadmium	anr		
Calcium	127000	152000	25000 100.0 75-125
Chromium	anr		
Cobalt			
Copper	anr		
Iron	anr		
Lead	anr		
Lithium			
Magnesium	24900	50600	25000 102.8 75-125
Manganese	anr		
Molybdenum			
Nickel			
Phosphorus			
Potassium	9160	37100	25000 111.8 75-125
Selenium	anr		
Silicon			
Silver	anr		
Sodium	124000	150000	25000 104.0 75-125
Strontium			
Thallium			
Tin			
Titanium			
Uranium			
Vanadium			
Zinc			

Associated samples MP6540: D30535-1F, D30535-2F, D30535-3F, D30535-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

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MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/23/11

Metal	D30545-1 Original	MSD	Spikelot MPICPALL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Boron						
Cadmium	anr					
Calcium	127000	152000	25000	100.0	0.0	20
Chromium	anr					
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Lithium						
Magnesium	24900	50200	25000	101.2	0.8	20
Manganese	anr					
Molybdenum						
Nickel						
Phosphorus						
Potassium	9160	36700	25000	110.2	1.1	20
Selenium	anr					
Silicon						
Silver	anr					
Sodium	124000	149000	25000	100.0	0.7	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP6540: D30535-1F, D30535-2F, D30535-3F, D30535-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30535
Account: KPFCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

6.1.2

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SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/23/11

Metal	BSP Result	Spikelot MPICPALL % Rec	QC Limits
Aluminum			
Antimony			
Arsenic	anr		
Barium	anr		
Beryllium			
Boron			
Cadmium	anr		
Calcium	26200	25000	104.8 80-120
Chromium	anr		
Cobalt			
Copper	anr		
Iron	anr		
Lead	anr		
Lithium			
Magnesium	26200	25000	104.8 80-120
Manganese	anr		
Molybdenum			
Nickel			
Phosphorus			
Potassium	27300	25000	109.2 80-120
Selenium	anr		
Silicon			
Silver	anr		
Sodium	27000	25000	108.0 80-120
Strontium			
Thallium			
Tin			
Titanium			
Uranium			
Vanadium			
Zinc			

Associated samples MP6540: D30535-1F, D30535-2F, D30535-3F, D30535-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

6.13

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General Chemistry

QC Data Summaries

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Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate as CaC	GN13085	5.0	0.0	mg/l	100	102	102.1	90-110%
Alkalinity, Carbonate	GN13086	5.0	0.0	mg/l	100	102	102.1	80-120%
Alkalinity, Total as CaCO3	GN13081	5.0	0.0	mg/l	100	102	102.1	90-110%
Chloride	GP6171/GN13001	0.50	0.0	mg/l	20	19.8	99.0	90-110%
HEM Oil and Grease	GP6223/GN13093	5.0	0.0	mg/l	40	38.3	95.8	78-114%
Nitrogen, Nitrate	GP6171/GN13001	0.045	0.0	mg/l	4.52	4.41	97.6	90-110%
Nitrogen, Nitrite	GP6171/GN13001	0.061	0.0	mg/l	6.09	6.56	107.7	90-110%
Solids, Total Dissolved	GN13041	10	0.0	mg/l	400	400	100.0	90-110%
Sulfate	GP6171/GN13001	0.50	0.0	mg/l	30	28.9	96.3	90-110%
Total Organic Carbon	GP6210/GN13082	1.0	0.0	mg/l	7.2	7.40	102.8	90-110%

Associated Samples:

Batch GN13041: D30535-1, D30535-2, D30535-3, D30535-4
Batch GN13081: D30535-1, D30535-2, D30535-3, D30535-4
Batch GN13085: D30535-1, D30535-2, D30535-3, D30535-4
Batch GN13086: D30535-1, D30535-2, D30535-3, D30535-4
Batch GP6171: D30535-1, D30535-2, D30535-3, D30535-4
Batch GP6210: D30535-1, D30535-2, D30535-3, D30535-4
Batch GP6223: D30535-1, D30535-2, D30535-3, D30535-4
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP6223/GN13093	mg/l	40	36.6	4.5	20%

Associated Samples:

Batch GP6223: D30535-1, D30535-2, D30535-3, D30535-4

(*) Outside of QC limits

7.2
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DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO ₃	GN13081	D30551-1	mg/l	306	315	3.0	0-20%
Solids, Total Dissolved	GN13041	D30535-1	mg/l	10100	10100	0.0	0-25%
Total Organic Carbon	GP6210/GN13082	D30425-4	mg/l	158	158	0.0	0-20%

Associated Samples:

Batch GN13041: D30535-1, D30535-2, D30535-3, D30535-4

Batch GN13081: D30535-1, D30535-2, D30535-3, D30535-4

Batch GP6210: D30535-1, D30535-2, D30535-3, D30535-4

(*) Outside of QC limits

7.3

7

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO ₃	GN13081	D30551-1	mg/l	306	100	407	100.8	80-120%
Chloride	GP6171/GN13001	D25282-8	mg/l	201	100	309	108.0	80-120%
Nitrogen, Nitrate	GP6171/GN13001	D25282-8	mg/l	11.0	28.3	38.4	97.0	80-120%
Nitrogen, Nitrite	GP6171/GN13001	D25282-8	mg/l	0.0	3.05	3.1	101.8	80-120%
Sulfate	GP6171/GN13001	D25282-8	mg/l	574	500	1050	95.2	80-120%
Total Organic Carbon	GP6210/GN13082	D30535-1	mg/l	34.5	50	82.0	95.0	80-120%

Associated Samples:

Batch GN13081: D30535-1, D30535-2, D30535-3, D30535-4

Batch GP6171: D30535-1, D30535-2, D30535-3, D30535-4

Batch GP6210: D30535-1, D30535-2, D30535-3, D30535-4

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

7.4
7

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Alkalinity, Total as CaCO ₃	GN13081	D30551-1	mg/l	306	100	409	0.6	20%
Chloride	GP6171/GN13001	D25282-8	mg/l	201	100	309	0.0	20%
Nitrogen, Nitrate	GP6171/GN13001	D25282-8	mg/l	11.0	28.3	38.5	0.3	20%
Nitrogen, Nitrite	GP6171/GN13001	D25282-8	mg/l	0.0	3.05	3.1	0.0	20%
Sulfate	GP6171/GN13001	D25282-8	mg/l	574	500	1050	0.0	20%
Total Organic Carbon	GP6210/GN13082	D30535-1	mg/l	34.5	50	81.7	0.4	20%

Associated Samples:

Batch GN13081: D30535-1, D30535-2, D30535-3, D30535-4

Batch GP6171: D30535-1, D30535-2, D30535-3, D30535-4

Batch GP6210: D30535-1, D30535-2, D30535-3, D30535-4

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

7.5
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